



**HIGH PERFORMANCE DUAL
FOUR-OHM VOICE COIL
SUBWOOFERS WITH
CHROME BASKET**

MODELS PSW-10DC AND PSW-12DC

OWNER'S MANUAL



Congratulations on your purchase of the **Prestige** High Performance Subwoofer. The **Prestige** Subwoofers are designed to provide you with high quality Bass reproduction required to make your car audio system perform to its full potential.

PRESTIGE Subwoofer Features

- Dual 4-Ohm voice coil for maximum flexibility and performance
- Low-Q parameters for Isobaric and small sealed box enclosures
- Vented magnet for improved performance
- Gold-plated binding posts that can accept up to 10-gauge wire
- Long throw suspension assembly
- Poly-carbon woofer cone
- Chrome basket

SUBWOOFER PARAMETERS

	<u>PSW-10DC</u>	<u>PSW-12DC</u>
Nominal Power Rating	225 Watts	260 Watts
Maximum Power Rating	450 Watts	525 Watts
Ferrite Magnet	30 Ounce	40 Ounce
Frequency Response	20 Hz-2.5 kHz	20 Hz-2.5 kHz
Resonant Frequency (F/O)	32 Hz \pm 20%	20 Hz \pm 20%
VC Diameter	1.5"	2.0"
Sound Pressure Level	89 dB \pm 1.5 dB	90 dB \pm 1.5 dB
Xmax	6mm	7mm
Nominal Impedance	4 Ohms x 2	4 Ohms x 2
DCR	3.7 Ohms	3.4 Ohms
Speaker Weight	3.0 kg	4.3 kg

WARNING: High-powered car audio systems may produce sound pressure levels that exceed the threshold at which hearing loss may result. They may also impair a driver's ability to hear traffic sounds or emergency vehicles. Use common sense and practice safe listening habits when listening to your audio system.

DUAL VOICE COIL WIRING

CAUTION: Never connect only one voice coil of a dual voice coil woofer. Both must be driven at the same time for proper operation. Never connect an amplifier to an impedance load lower than it is rated to handle.

SERIES/PARALLEL MONAURAL CONNECTION

Parallel wiring for a single, dual-voice coil 4-Ohm woofer in a monaural system will result in a total impedance load of 2 Ohms at the amplifier, (See Fig. 1) if your amplifier is rated to drive 2 Ohms in bridged or one-channel operation. If each of

two dual-voice coil 4-Ohm woofers are connected in parallel and then wired to each other in parallel, a 1-Ohm monaural output would result (See Fig. 2). On the other hand, if your amplifier is rated for 4-Ohm operation in bridged or one-channel operation, series-connect the woofer voice coils (See Fig. 3). If the amplifier is rated for 8 Ohms, interconnect the voice coils of the woofer in series as shown to obtain 8-Ohm monaural output (See Fig. 4).

PARALLEL



Fig. 1

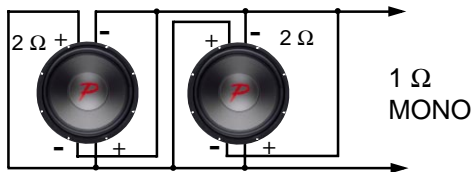


Fig. 2

SERIES

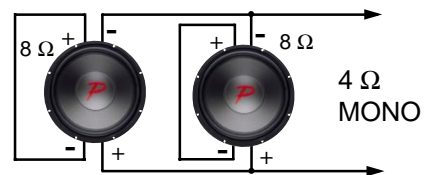


Fig. 3



Fig. 4

SERIES/PARALLEL STEREO CONNECTION

Series wiring of each of two, dual voice-coil 4-Ohm woofers will result in a total impedance load of 8 Ohms at each channel of the amplifier (See Fig. 5). Otherwise, connect one woofer to each channel for 4-Ohm stereo operation (See Fig. 6), or two parallel-wired woofers (one-per-channel) for 2-Ohm stereo operation (See Fig.7).

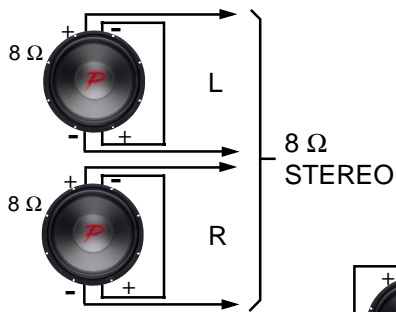


Fig. 5



Fig. 6

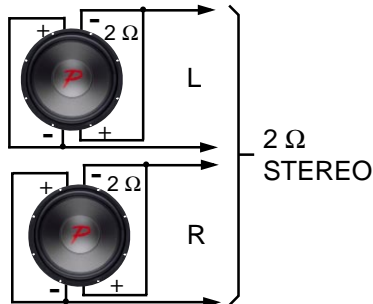


Fig. 7

SERIES/PARALLEL CONNECTION USING THREE WOOFERS

Three dual 4-Ohm voice-coil woofers can be connected in such a way as to produce a 0.66-Ohm (See Fig.8) or 2.66-Ohm monaural output as shown below (See Fig.9).

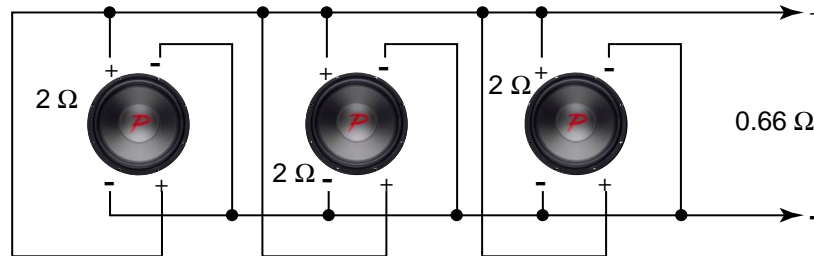


Fig. 8

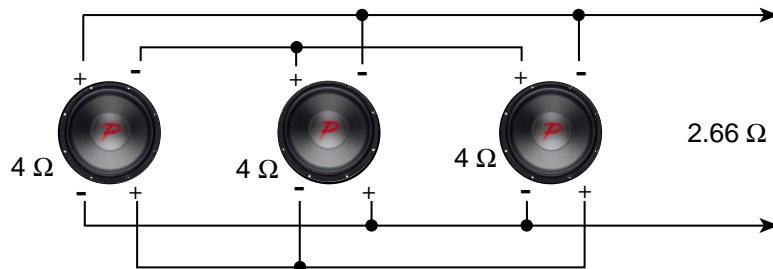


Fig. 9

INSTALLATION RECOMMENDATIONS

To realize the utmost in sound reproduction from your subwoofer(s), follow these installation recommendations:

- Use a quality large gauge wire to connect your subwoofer to the amplifier
- Use a subwoofer crossover to remove unwanted higher frequencies
- Position the enclosure in the rear of the vehicle with the subwoofer facing rearward to improve bass response and avoid cancellation of audio frequencies

ENCLOSURE CONSTRUCTION RECOMMENDATIONS

To enhance subwoofer performance, the following general recommendations should be addressed when constructing the speaker enclosure:

- Use 3/4" MDF for your construction material
- Glue all joint seams
- Screw or nail all joints tight
- Brace all walls

DESIGNING AND BUILDING YOUR SPEAKER ENCLOSURE

The following parameters are offered to assist you in designing your own enclosure. There are many computer software programs available on the market that, along with this information, will allow you to construct the type of enclosure that best suits your needs.

To obtain the best possible results, we suggest you use our recommended enclosure designs and have an automotive sound professional build your enclosure.

Thiele/Small Parameters

Parameters	PSW-10DC		PSW-12DC	
	Series	Parallel	Series	Parallel
Fs	32.56 Hz	46.62 Hz	20.96 Hz	22.89 Hz
Re	6.88 Ohms	2.15 Ohms	6.88 Ohms	1.76 Ohms
Res	98.91 Ohms	2.0 Ohms	87.17 Ohms	16.24 Ohms
Qms	7.06	0.75	4.26	3.26
Qes	0.49	0.80	0.34	0.35
Qts	0.46	0.39	0.31	0.32
R2	11.55 Ohms	2.98 Ohms	17.88 Ohms	4.42 Ohms
Vas (Sd)	67.88 Ltrs	33.12 Ltrs	206.53 Ltrs	173.06 Ltrs
Mms (Sd)	59.29 Gms	59.29 Gms	94.51 Gms	94.51 Gms
Cms (Sd)	403 M/Ntn	197 M/Ntn	610 M/Ntn	511 M/Ntn
Bl (Sd)	13.04 Tesla-M	6.80 Tesla-M	15.96 Tesla-M	8.23 Tesla-M
SPLref (Sd)	88.6 dB	88.0 dB	89.4 dB	89.5 dB

Recommended Enclosure Designs

	PSW-10DC	PSW-12DC
SEALED BOX	(Vb) Box Volume = 1.15 Cu. Ft. F3: 55 Hz Dimensions: 12.5" W x 20.5" H x 7.75" D	(Vb) Box Volume = 1.42 Cu. Ft. F3: 52 Hz Dimensions: 13.5" W x 21.75" H x 8.25" D
VENTED BOX	(Vb) Box Volume = 1.15 Cu. Ft. F3: 45 Hz Dimensions: 12.5" W x 20.5" H x 7.75" D (P) Port = 2" ID x 7.875" Long	(Vb) Box Volume = 1.68 Cu. Ft. F3: 40 Hz Dimensions: 14.25" W x 23" H x 8.75" D (P) Port = 2" ID x 3.75" Long
BANDPASS BOX (4th order)	Vbt = 1.15 Cu. Ft. (total) Vbs = .56 Cu.Ft. (sealed side) Vbp = .59 Cu. Ft. (ported side) (speaker loads into this side) Port = 3" ID x 6.125" Long F3: 42 Hz & 120 Hz with negligible gain 10" W (inside) x 16" H (inside) x 6" D (inside) (sealed side) x 6.25" D (inside) (vented side)	Vbt = 1.68 Cu. Ft. (total) Vbs = .79 Cu.Ft. (sealed side) Vbp = .89 Cu. Ft. (ported side) (speaker loads into this side) Port = 3" ID x 4.125" Long F3: 37 Hz & 110 Hz with negligible gain 12" W (inside) x 17.875" H (inside) x 6.25" D (inside) (sealed side) x 7.125" D (inside) (vented side)

